



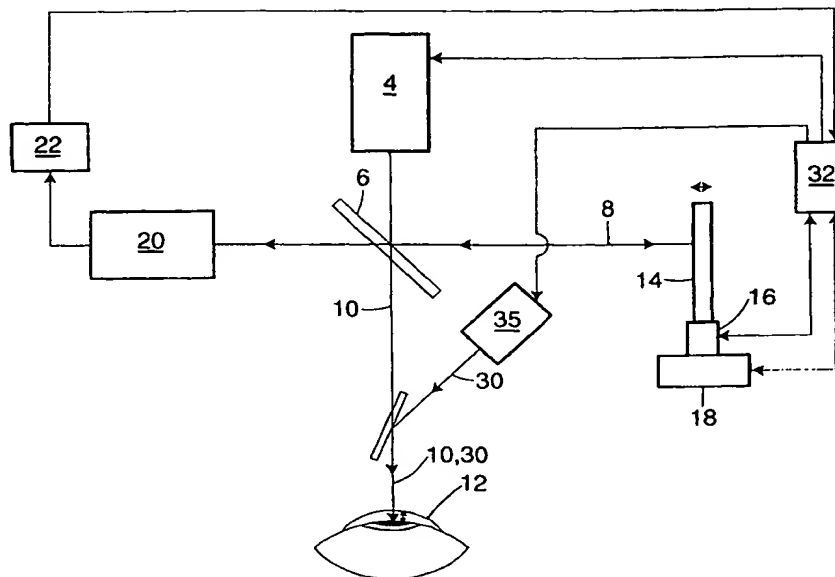
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(21) International Application Number: PCT/AU99/00479 (22) International Filing Date: 17 June 1999 (17.06.99) (30) Priority Data: PP 4202                      17 June 1998 (17.06.98)                      AU (71) Applicant (for all designated States except US): THE LIONS EYE INSTITUTE OF WESTERN AUSTRALIA INCORPORATED [AU/AU]; 2nd Floor, 2 Verdun Street, Nedlands, W.A. 6009 (AU). (72) Inventor; and (75) Inventor/Applicant (for US only): VAN SAARLOOS, Paul, Phillip [AU/AU]; 14 Dunster Road, Karrinyup, W.A. 6018 (AU). (74) Agents: NOONAN, Greg et al.; Freehills Patent Attorneys, Level 47, 101 Collins Street, Melbourne, VIC 3000 (AU).		(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).  <b>Published</b> <i>With international search report.</i>	

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## (57) Abstract

A method of tracking the position of an object surface (12) includes generating an interference signal between light beams of short temporal coherence length respectively comprising a primary beam (10) reflected or scattered from the object surface (12) and a reference beam (8). A reference surface (14) in the path of said reference beam (8) is scanned about a position at which the interference signal is generated, which position is thereby indicative of the position of the object surface (12). In one aspect, the position of the reference surface (14) is controlled (16, 18) to maintain a predetermined point in the range of the scanning at the indicative position.